

Message

From: Anita Singh [asingh428@gmail.com]
Sent: 7/4/2017 2:52:34 AM
To: LEE, LILY [LEE.LILY@EPA.GOV]
CC: Nguyen, Lyndsey [Nguyen.Lyndsey@epa.gov]; donna.j.getty [donna.j.getty@leidos.com]
Subject: Re: Data for Parcel C

Lily,

Karla's evaluations/scoring make sense.

So no need to compare FSS results with release criteria?

It might be too late in the game to ask Navy to include Ra-226 and Th-232 evaluations?

Not sure if we all knew earlier (I did not know this) that release criteria for Bi-214 and AC-228 are not available for this site.

It will help us in our review and scoring of SUs if Navy include Ra-226 and Th-232 in their evaluations.

If not - we will do our best.

Thanks Lily.

Enjoy the 4th.

anita

On Mon, Jul 3, 2017 at 7:38 PM, LEE, LILY <LEE.LILY@epa.gov> wrote:

Dear Anita,

My understanding is that Bi-214 and Ac-228 are more reliable indicators of actual concentrations of Ra-226 and Th-232 than measurements using the onsite lab measurements of Bi-214 and Ac-228. So that is why they picked it. Lyndsey and Dave did not object to these in the past.

If the SU only has FSS, then we had discussed before that if that was a SU that Karla had scored has having a likelihood of contamination based on historical conditions, then we would flag that for sampling. So that is useful information for sampling, even if it is not for PCA. So Allaa will be tracking that in the spreadsheet she is creating, based on your valuable table, which I sent to her to combine.

Thank you again for your very thorough work!

Lily

From: Anita Singh [mailto:asingh428@gmail.com]

Sent: Monday, July 3, 2017 7:26 PM

To: LEE, LILY <LEE.LILY@EPA.GOV>

Cc: Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>; donna.j.getty <donna.j.getty@leidos.com>; Anita Singh <asingh428@gmail.com>

Subject: Re: Data for Parcel C

Hello Lily,

Thanks for the note Lily. I think (discussed in an internal EPA call and also in Tiger Team calls), it was suggested

that SUs/TUs with FSS data satisfying release criteria need not be evaluated further. This is especially true for SUs/TUs

with data available only from FSS phase.

Note that more than 50% of TUs from parcel C fall in this category with data only from FSS phase.

Per our understanding described above, TUs with FSS data satisfying release criteria do not require further PCA evaluations.

Based upon high variability in FSS data, we have given non-zero scores (0.5) for some of those TUs.

However, those TUs may not require further investigation if FSS data satisfy release criteria.

Since release criteria are available for Ra-226 and Th-232, we suggest that for other parcels, Navy include Ra-226 and Th-232 in their statistical evaluations. Moreover, since Ra-226 and Bi-214 (Th-232 and Ac-228) are correlated, different pattern displayed by Ra 226 and Bi-214 (and/or by Th-232 and Ac-228) may be useful in identifying falsification/manipulation.

Finally, it is not clear why Navy performed evaluations for B-214 and Ac-228 and not for Ra-226 and Th-232, especially when Ra-226 is

the most prevalent ROC at the site.

We can discuss these issues and ranking after your review and feedback from others.

Anita

On Mon, Jul 3, 2017 at 6:13 PM, LEE, LILY <LEE.LILY@epa.gov> wrote:

Dear Donna/Anita,

I saw your question “What process did Navy use in choosing to plot these three ROCs given there is no associated release criteria for them?”

Below is my understanding of this question. I am sending to Lyndsey in case I’ve gotten this wrong.

Ra-226 is the most prevalent Radionuclides of Concern (ROC) at this site. My understanding is that Bi-214 is a decay product of Ra-226. The analytical method makes the Bi-214 result a more reliable indicator of Ra-226 concentration vs the result for Ra-226, ironically.

Similarly Ac-228 is a more reliable indicator of Th-232 (ROC).

K-40 is not a concern from a health impact perspective, but it is an indicator of location since samples from same location are expected to have similar K-40 levels because of similar exposure to cosmic radiation. So K-40 concentration anomalies was one way that the Navy had previously identified falsification.

From: Nguyen, Lyndsey

Sent: Thursday, June 29, 2017 12:25 PM

To: donna.j.getty <donna.j.getty@leidos.com>

Cc: LEE, LILY <LEE.LILY@EPA.GOV>

Subject: RE: Data for Parcel C

Hi Donna,

There isn't a K-40 release criteria. We analyze for K-40 to determine discrepancies in quality of data (i.e. K-40 should be consistent within each sample). K-40 can range depending if you the sample is more rock-like vs. sandy, or from one region of the country vs. another region. If you must have a K-40 value, the highest that I have ever seen is roughly 27pCi/g.

Yeah, I would use the release criteria for Ra-226 for Bi-214, and the release criteria for Th-232 for Ac-228.

Hope this helps,



Lyndsey Nguyen

Environmental Response Team-Las Vegas

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Email: Nguyen.Lyndsey@EPA.gov

From: LEE, LILY

Sent: Tuesday, June 27, 2017 8:18 AM

To: donna.j.getty <donna.j.getty@leidos.com>

Cc: Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>

Subject: Re: Data for Parcel C

No, but I think you can use ra226 for bi 214 and maybe th232 for ac 228. Lyndsey can you help?

Sent from my iPhone

On Jun 27, 2017, at 8:08 AM, Getty, Donna J <Donna.J.Getty@leidos.com> wrote:

Lily,

Are there specified release criteria for K-40, Bi-214 and Ac-228?

I checked the document that you provided following the last conference call and there was none specified for these ROCs. I also checked the SAP on the OneDrive site and there wasn't any listed within that document.

I am asking because if there was associated release criteria we could use that as a factor in the scoring we completed for Parcel C.

Donna J. Getty | Leidos

Statistician | SERAS

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donna.j.getty@leidos.com | leidos.com/civil

<image001.png>

From: LEE, LILY [<mailto:LEE.LILY@EPA.GOV>]

Sent: Monday, June 26, 2017 2:20 PM

To: Anita Singh <asingh428@gmail.com>; donna.j.getty <donna.j.getty@leidos.com>

Subject: EXTERNAL: Data for Parcel C

Lily Lee

Cleanup Project Manager

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For information on Superfund in general: www.epa.gov/region9/superfund

For information on Hunters Point Naval Shipyard: www.epa.gov/superfund/hunterspoint

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Anita Singh

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